



## UNIVERSITI TEKNOLOGI MARA

### CSC584: ENTERPRISE PROGRAMMING

<b>Course Name (English)</b>	ENTERPRISE PROGRAMMING <b>APPROVED</b>
<b>Course Code</b>	CSC584
<b>MQF Credit</b>	3
<b>Course Description</b>	The course is designed to introduce students to intermediate level Java programming language and produce students who are able to solve extensive computer-based and enterprise web-based problems. It emphasizes various aspects of problem solving and develop applications using enterprise component technologies.
<b>Transferable Skills</b>	Demonstrate analytical skills using technology.
<b>Teaching Methodologies</b>	Lectures, Lab Work
<b>CLO</b>	CLO1 Apply object-oriented concepts in architecture of Java EE technology CLO2 Propose problem solving in architecture of Java EE technology CLO3 Display practical skills in enterprise application based on Java EE architecture and technology
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. Review of Object Oriented Programming Concepts</b> 1.1) Java characteristics and fundamental types 1.2) Objects, classes, packages 1.3) Inheritance & Polymorphism concept 1.4) Inheriting instances fields and methods 1.5) Method overriding 1.6) Access levels – public, protected, private 1.7) Abstract super classes and methods 1.8) Interface	
<b>2. Introduction to Java Enterprise Edition (Java EE)</b> 2.1) Overview of Java EE Platform 2.2) Role of Application Servers 2.3) Java EE Architecture (MVC, Spring) 2.4) Java EE Patterns 2.5) Java EE Components (Web components, EJB)	
<b>3. Enterprise JavaBean (EJB) components</b> 3.1) Define Java Bean - create java bean 3.2) Describe the custom bean properties and events 3.3) Describe types of EJB - session beans, entity beans and message driven beans	
<b>4. Web Component -Servlet</b> 4.1) Servlets 4.2) Creating & Running Servlets 4.3) The Servlet API 4.4) HTML forms 4.5) Session tracking 4.6) Database programming in servlets	

**5. Java Database connectivity**

- 5.1) Overview of java database programming
- 5.2) Define JDBC API
- 5.3) Describe the various JDBC drivers
- 5.4) Identify JDBC products
- 5.5) Describe the 2-tier server client model
- 5.6) Setup JDBC connection to a database with JSP and Servlet
- 5.7) Create and Execute SQL statement
- 5.8) Describe ResultSet Object

**6. Web Component - Java Server Page (JSP)**

- 6.1) HTML
- 6.2) JSP processing
- 6.3) Predefined variables
- 6.4) JSP directives
- 6.5) Associating properties with input parameters
- 6.6) Forwarding requests from JSP

**7. Development of Enterprise Application**

- 7.1) Choose the Java EE Architecture and Java EE pattern
- 7.2) Design the Web components - HTML and JSP
- 7.3) Develop Java Beans and Servlets
- 7.4) Construct the JDBC connectivity with the enterprise application

**8. Packaging and Deployment of Enterprise Application**

- 8.1) Packaging components
- 8.2) Packaging Java EE applications - EJB modules, Web modules
- 8.3) Deployment Descriptors
- 8.4) Deployment Tools

Assessment Breakdown		%	
Continuous Assessment		100.00%	

  

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment 1 (Clo1)	15%	CLO1
	Assignment	Assignment 2 ( CLO2)	15%	CLO2
	Final Project	Group project and presentation	40%	CLO3
	Test	Test 1	15%	CLO1
	Test	Test 2	15%	CLO2

  

Reading List	Recommended Text	<ul style="list-style-type: none"> <li>2016, <i>Core Java®</i>, Volume I—<i>Fundamentals</i>, 10 Ed., Prentice Hall [ISBN: 978-013417729]</li> <li>2016, <i>Core Java®</i>, Volume II—<i>Advanced Features</i>, 10 Ed., Prentice Hall [ISBN: 978-013417729]</li> </ul>
	Reference Book Resources	<ul style="list-style-type: none"> <li>Dr. Liang 2017, <i>Introduction to Java Programming: Comprehension</i>, 11 Ed., Pearson; 11 edition (March 11, 2017) [ISBN: 978-013467094]</li> <li>Joel Murach 2017, <i>Murach's Java Programming</i>, 5 Ed., Mike Murach &amp; Associates [ISBN: 978-194387207]</li> <li>Herbert Schildt 2014, <i>Java: A Beginner's Guide</i>, McGraw Hill Education [ISBN: 978-007180925]</li> <li>2017, <i>Java 9 for Programmers</i>, 4 Ed., Prentice Hall [ISBN: 978-013477756]</li> <li>2011, <i>Java Programming: From Problem Analysis to Program Design (Introduction to Programming)</i>, 5 Ed., Cengage Learning [ISBN: 978-111153053]</li> </ul>
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	